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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/404,712	09/24/1999	KOJI MANABE	040373-0263	8708

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FOLEY & LARDNER
3000 K STREET NW
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WASHINGTON, DC 25696

EXAMINER

KLIMACH, PAULA W

ART UNIT	PAPER NUMBER
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2135

DATE MAILED: 08/02/2004

12

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/404,712

Applicant(s)

MANABE, KOJI

Examiner

Paula W Klimach

Art Unit

2135

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

This office action is in response to amendment filed on 6/01/04 (Paper No. 11). Original application contained Claims 1-7. Applicant added Claims 8-10 and amended Claims 1-3. The amendment filed on 6/01/04 have been entered and made of record. Therefore, presently pending claims are 1-8.

Response to Arguments

Applicant's arguments filed 6/01/04 have been fully considered and are found persuasive, however attention is brought to the new art cited.

The applicant argued that the references cited do not disclose, "detecting a device ID of the transmitting-receiving device on the another party." This is found persuasive and the examiner directs the applicant to the new references cited.

The applicant argues further, "one skilled in the art would not have modified the Murphy system to include an authentication histories storing means to arrive at the invention of claims 1 and 2." This is found persuasive because Murphy does not perform any authentication, however the combination of Murphy and Garfinkle includes the idea of authentication. Keeping an authentication history would therefore be desirable in this system.

Claim Rejections - 35 USC § 103

1. **Claims 1-5 and 8-10** are rejected under 35 U.S.C. 103(a) as being unpatentable over Murphy (5,640,452) in view of Garfinkle (5,530,754), Heer et al (6,028,933), Kazuyoshi (JP 0 9035030 A), and Rackman (5,592,651).

Art Unit: 2135

In reference to claims 1-3 and 8-10, Murphy discloses a system for audio and video decryption, which suggests an AV data transmitting-receiving device comprises command input means, command control means, AV data transmitting means, encrypting means (Fig. 1); a transmitting-receiving device on another party comprises second input/output means, AV data receiving means, decrypting means (column 7 lines 21-32), device ID detecting means (column 6 lines 41-50).

However Murphy does not disclose the authentication of the devices and the maintenance of an authentication history. In addition Murphy does not disclose a device detecting the connection of another device.

Garfinkle teaches a video on demand system that allows the user to control the display of catalog data and to order video products, from the central station interactively with displayed catalog material (abstract). Therefore the transmit-receiving device of the provider detects the transmitting-receiving device on the another party is connected to a transmission line when the device sends user's video product order, it implies that the product providers detects the user is connected because the product provider would detect the message from the user's device (column 4 lines 35-65).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to detect the user connected to the service provider, as in Garfinkle, in the system as in Murphy. One of ordinary skill in the art would have been motivated to do this because it would allow immediate viewing of an ordered product and the central station would bill the user (column 4 lines 35-65).

Kazuyoshi discloses a fourth memory (34) stores the authentication log. An access controller (4) permits the access for every command when the authentication log containing the authentication demand from command execution part satisfies the access control data (basic abstract). The authentication log keeps a history that authentication has been previously performed.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to maintain a history log of authentication as taught by Kazuyoshi for the system disclosed in the combination of Garfinkle and Murphy. One of ordinary skill in the art would have been motivated to do this because it improves security of accessing IC card (page 2 paragraph 2).

Heer teaches authenticating means performs a device authentication operation for mutually checking that both said devices (Heer et al 6,028,933 Fig. 25), a key exchange operation for sharing a cryptographic key (Heer Fig. 24), and a cryptographic key storing means (column 26 lines 52-58). Heer teaches that the permanent key is available for the lifetime of the product. Therefore the key is a device ID associated with the product.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use the teachings of Heer of mutual authentication and key exchange in the combination of Murphy and Kazuyoshi. One of ordinary skill in the art would have been motivated to do this because it creates a hierarchical flow of trust via public certificates

Rackman discloses a system for limiting the number of different video game machines on which a cartridge may be played (abstract). The rules employed by the system disclosed by Rackman include that the maximum number of machines that a cartridge can connect to has not

been exceeded or that the machine is on the list of machines that the cartridge can connect to. The serial number is used as the device ID of the connecting machine.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to authenticate using rules, access list, as disclosed by Rackman in the combination of Murphy, Heer, and Kazuyoshi. One of ordinary skill in the art would have been motivated to do this because it is a simple cost effective method of preventing a merchant from renting the cartridges that have been purchased in an illegitimate way.

In reference to claim 4, the system disclosed by Murphy comprises the steps of detecting an ID of said transmitting-receiving device on another party with said, device ID detecting means (Murphy column 6 lines 41-48). Notifying command to said AV data transmitting means through said command control means and starting transmission of the AV data with said AV data transmitting means, when a command input for an AV data transmission direction is provided from a user to said command input means (Murphy column 7 lines 21-29). Murphy suggests waiting for a command input for an AV data transmission direction from a user to said command input means, if the ID of said transmitting-receiving device on another party is not included in the historical information (Fig. 1). Murphy further suggests notifying the command to said AV data transmitting means through said command control means and starting transmission of the AV data with said AV data transmitting means (Fig. 1); encrypting the AV data with said encrypting means using the cryptographic key and sending the encrypted AV data to said first input/output means; sending the encrypted AV data to a transmission line with said first, input/output means (Murphy column 7 lines 34-49); receiving the encrypted AV data from the transmission line with said second input/output means (Murphy Fig. 2). The Murphy system

Art Unit: 2135

decrypts the encrypted AV data with said decrypting means using the cryptographic key and sending the decrypted AV data to said AV data receiving means; and receiving the decrypted AV data with said AV data receiving means (Fig. 3).

Kazuyoshi discloses checking whether the of said transmitting receiving device on another party is included in historical information stored in said authentication histories storing means (Kazuyoshi basic abstract); access is allowed if authentication log contains the authentication demand that satisfies the access control data and Heer performs a key exchange, which is a method of mutual authentication. Kazuyoshi implies recording the ID of said transmitting receiving device on another party as historical information in said authentication histories storing means after the device authentication and the key exchange operations (Kazuyoshi basic-abstract). The Kazuyoshi authentication history (log) is used to determine if authentication demand was made followed Heer key exchanged is used to encrypt and decrypt, but is also a method of mutual authentication and therefore a form of authentication.

Performing the device authentication operation and the key exchange operation with said second authenticating means on another party by said first authenticating means is disclosed by Heer (Fig. 25). The ID of said transmitting-receiving device on another party is included in the historical information as suggested by Kazuyoshi. Heer discusses performing the device authentication operation and the key exchange operation with said second authenticating means on another party by said first authenticating means, which can be carried out when the command input for the AV data transmission direction is provided by the transmission of Murphy in Fig. 1 (Heer Fig. 25).

In reference to claim 5, in addition to the limitations discussed for claim 4, Heer records a cryptographic key shared as a result of the key exchange operation as a first cryptographic key in said cryptographic key storing means (column 26 lines 52-58 in combination with claim 3).

2. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murphy, Rackman, Kazuyoshi, and Heer as applied to claims 4 and 5 respectively above, and further in view of Kunzman.

The combination of Murphy, Rackman, Kazuyoshi, and Heer do not disclose the use of the IEE 1394 serial bus.

Kunzman teaches the use of IEEE 1394 for real-time data transport (page 406 paragraph 3).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use the IEE 1394 serial bus for the transportation of audiovisual data in the combination of Murphy, Rackman, Kazuyoshi, and Heer. One of ordinary skill in the art would have been motivated to do this because it provides an ideal mechanism for connection digital consumer audio/video equipment (summary).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paula W Klimach whose telephone number is (703) 305-8421.

The examiner can normally be reached on Mon to Thr 9:30 a.m to 5:30 p.m.

Art Unit: 2135

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on (703) 305-4393. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PWK
Wednesday, July 21, 2004

Handwritten signature
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